

What is claimed is:

1. A method for measuring residual chromatic dispersion in an optical transmission system, the method comprising the steps of:
 - 5 introducing a predetermined amount of chromatic dispersion at the receive end of the system;
 measuring a bit error rate for the system corresponding to the predetermined amount of chromatic dispersion;
 iterating the introducing and measuring steps until the bit error rate is a
10 minimum over all measured bit error rates;
 wherein the residual chromatic dispersion in the optical transmission system is represented by a complement of the predetermined amount of chromatic dispersion at which the minimum bit error rate is achieved.
- 15 2. The method as defined in claim 1 wherein step of iterating is responsive to the bit error rate in the measuring step and includes selecting a new predetermined amount of chromatic dispersion for the introducing step.
- 20 3. The method as defined in claim 2 wherein the step of selecting further includes controlling selection of the predetermined amount of chromatic dispersion in a manner to produce a minimum bit error rate.
- 25 4. The method as defined in claim 1 further including the step of compensating at least some portion of the residual chromatic dispersion in the optical transmission system by selecting a compensating amount from a chromatic dispersion range including 0 ps/nm through and including the predetermined amount of chromatic dispersion at which the minimum bit error rate was achieved.
- 30 5. The method as defined in claim 4 wherein step of iterating is responsive to the bit error rate in the measuring step and includes selecting a new predetermined amount of chromatic dispersion for the introducing step.

6. The method as defined in claim 5 wherein the step of selecting further includes controlling selection of the predetermined amount of chromatic dispersion in a manner to produce a minimum bit error rate.

5 7. Apparatus for measuring residual chromatic dispersion in an optical transmission system, the apparatus comprising:

a dispersion compensator for introducing a predetermined amount of chromatic dispersion at the receive end of the system;

10 a bit error rate test element for measuring a bit error rate for the system corresponding to the predetermined amount of chromatic dispersion;

a control element coupled to said compensator and said test element for adjusting said compensator to a new predetermined amount of chromatic dispersion in order to reduce the bit error rate for the system;

15 wherein at least a portion of the residual chromatic dispersion in the optical transmission system is represented by a complement of the predetermined amount of chromatic dispersion at which the reduced bit error rate was achieved.

20 8. The apparatus as defined in claim 7 wherein the control element adjusts the compensator to a new predetermined amount of chromatic dispersion in order to minimize the bit error rate for the system, the residual chromatic dispersion in the optical transmission system being represented by a complement of the predetermined amount of chromatic dispersion at which a minimum bit error rate is achieved.

25 9. The apparatus as defined in claim 8 wherein the control element adjusts the dispersion compensator to a compensating amount of chromatic dispersion selected from a chromatic dispersion range including 0 ps/nm through and including the predetermined amount of chromatic dispersion at which the
30 minimum bit error rate was achieved.